

layers having a second thickness and the first material layers alternating with the second material layers;

at least one of the first and second material layers having a thickness of less than twenty-five nanometers.

#### REMARKS

Claims 1 to 5 are now pending.

Applicants respectfully request reconsideration of the present application in view of this amendment.

With respect to paragraphs two (2) and three (3) of the Office Action, claim 1 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for stating "a plurality of one of crystalline and amorphous first material layers." Applicants believe that claim 1 as previously written was clear; however, claim 1 has been rewritten above to further clarify the statements regarding the plurality of the first and second materials layers, now stating "a plurality of first material layers having a first thickness, the plurality of first material layers being one of crystalline and amorphous; and a plurality of second material layers, the plurality of second material layers being one of crystalline and amorphous." No new matter was added. A Version Showing Changes Made is attached hereto showing the changes made to claim 1, where underlining indicates added text and square bracketing indicates deleted text.

With respect to paragraph six (6) of the Office Action, the above-identified application can receive the benefit of the priority dates of its parent U.S. Application No. 09/795,622 (filed February 6, 1997) and its priority-claimed German Application No. 196 04 348.4 (filed February 7, 1996). Applicants are not required to submit a certified copy of the priority German Application No. 196 04 348.4 since a certified copy of the priority German Application was filed in the parent U.S. Application No. 08/795,622 (identified on the Application Transmittal dated December 28, 2000) from which this divisional stems. See MPEP § 201.14(b).

Accordingly, in light of the priority date of February 7, 1996 applicable to the current above-identified application, the Fischer reference, having a U.S. filing date of November 29, 1997 (and priority German application filing date of November 29, 1996), cannot serve as a prior art reference to the current above-identified application.

With respect to paragraphs four (4), five (5) and six (6) of the Office Action, claims 1 to 5 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,778,987 to Saaski et al. (the "Saaski reference") in view of U.S. Patent No. 5,929,633 to Fischer (the "Fischer reference").

The Saaski reference purportedly concerns an optical measuring device. (See Title) The Saaski reference refers to physical changes induced in the spectral modulation sensor's optically resonant structure by the physical parameter being measured cause microshifts of its reflectivity and transmission curves, and of the selected operating segment(s) thereof being used, as a function of the physical parameter being measured. (See Abstract). The Saaski reference further refers to a bonded silicon and glass wafer sandwich to which a light absorbing and/or reflecting coating may then be added to the outer surface of the etch stopped layer which forms the covers for the cavities. (See col. 18, lines 60-65). The Saaski reference states that the light absorbing and/or reflecting coating may be formed by using conventional vacuum deposition techniques to deposit two or more alternating layers of chrome and silicon on the outer surface of the etch stopped layer of the silicon and glass wafer sandwich... the purpose of the light absorbing and/or reflecting coating is to prevent external light from entering optically resonant structure through its cover and to prevent light transmitted through the optically resonant structure into the cover from reentering the optically resonant structure from the cover. (See col. 18, line 67 - col. 19, line 10).

Claim 1, as rewritten above, recites:

A scale for technical devices which are used for high-resolution or ultrahigh-resolution imaging of structures, the scale comprising:

*a plurality of first material layers having a first thickness, the plurality of first material layers being one of crystalline and amorphous; and*

*a plurality of second material layers, the plurality of second material layers being one of crystalline and amorphous, which are distinguishable from the first material layers when imaged using high-resolution or ultrahigh-resolution imaging methods, the second material layers having a second thickness and the first material layers alternating with the second material layers;*

*at least one of the first and second material layers having a thickness of less than twenty-five nanometers.*

In contrast to the Saaski reference, claim 1 is directed to a scale for technical devices which are used for high-resolution or ultrahigh-resolution imaging of structures which includes a plurality of first material layers having a first thickness, the plurality of first material layers

being one of crystalline and amorphous, and a plurality of second material layers, the plurality of second material layers being one of crystalline and amorphous. Further, claim 1 states that the plurality of second material layers are distinguishable from the first material layers when images using high-resolution or ultrahigh-resolution imaging method, the second material layers having a second thickness and the first material layers alternating with the second material layers. Among other features, the Saaski reference does not teach or suggest plurality of first material layers having a first thickness, the plurality of first material layers being one of crystalline and amorphous, and a plurality of second material layers, the plurality of second material layers being one of crystalline and amorphous, as in claim 1. (Note that the previous Office Action dated January 17, 2002, at page 2 states that “Saaski does not disclose chrome being crystalline.” Applicants’ arguments made in Applicants’ earlier-filed Amendment dated July 17, 2002 are incorporated here as necessary.)

Accordingly, the Saaski reference does not render obvious claim 1, and withdrawal of the rejection of claim 1 under 35 U.S.C. § 103(a) is respectfully requested.

As discussed above and in Applicants’ earlier-filed Amendment dated July 17, 2002, the Fischer reference cannot cure the deficiencies of the Saaski reference because the Fischer reference is not believed to be prior art to the present above-identified application.

Since claims 2 to 5 depend, directly or indirectly from claim 1, claims 2 to 5 are allowable over the Saaski reference for at least the same reasons as claim 1.

Moreover, to reject a claim as obvious under 35 U.S.C. § 103, the prior art must disclose or suggest each claim element and it must also provide a motivation or suggestion for combining the elements in the manner contemplated by the claim. (See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir. 1990), cert. denied, 111 S. Ct. 296 (1990); In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990)).

The Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a “technologically simple concept” -- which is not even the case here, there still must be some finding as to the “specific understanding or principle within the knowledge of a skilled artisan” that would motivate a person having no knowledge of the claimed subject matter to “make the combination in the manner claimed”, stating that:

In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. **With this simple concept in mind, the Patent and Trademark Office found prior art**

**statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab's invention to make the combination in the manner claimed.** In light of our holding of the absence of a motivation to combine the teachings in Evans, we conclude that the Board did not make out a proper *prima facie* case of obviousness in rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

(See In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Federal Circuit 2000) (citations omitted, italics in original, emphasis added)). Here again, there have been no such findings. Instead, the Saaski reference refers to providing several advantages simultaneously, such as enabling longer operating segments and microshifts to be used for greater sensitivity or detection range, and also eliminating certain errors caused by fluctuations in input light intensity or by changes in light intensity caused by optical fiber bending and optical fiber connectors. (See Saaski reference Abstract). The present above-identified application is directed to manufacturing and calibrating a scale in the nanometer range, using material which differ particularly with respect to their compositions which make them easily distinguishable from one another by their contrast when they are images using high-resolution or ultrahigh-resolution imaging methods. (present above-identified Specification, pages 6-7).

No motivation or suggestion for combining the elements in the manner contemplated by claim 1 is shown in the Saaski reference.

Accordingly, it is respectfully submitted that the rejection of claims 1 to 5 under 35 U.S.C. § 103(a) over the Saaski reference in view of the Fischer reference (which cannot be used as prior art here) should be withdrawn.

### CONCLUSION

In view of all of the above, it is believed that the rejections of claims 1 to 5, under 35 U.S.C. § 103(a) have been obviated, and that all currently pending claims 1 to 5 are allowable.

It is therefore respectfully requested that the rejections be reconsidered and withdrawn, and that the present application issue as early as possible.

If it would further allowance of the present application, the Examiner is invited to contact the undersigned at the contact information shown below.

Respectfully submitted, (By: Richard L. Mayer)  
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Dated: February 19, 2003

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**CUSTOMER NO. 26646**

**VERSION SHOWING CHANGES MADE**

**Application Serial No. 09/750,837**

**Attorney Docket No. 2345/17A**

**IN THE CLAIMS:**

Please amend without prejudice claim 1 as follows:

1. (Twice amended) A scale for technical devices which are used for high-resolution or ultrahigh-resolution imaging of structures, the scale comprising:

a plurality of [one of crystalline and amorphous] first material layers having a first thickness, the plurality of first material layers being one of crystalline and amorphous; and

a plurality of [one of crystalline and amorphous] second material layers, the plurality of second material layers being one of crystalline and amorphous, which are distinguishable from the first material layers when imaged using high-resolution or ultrahigh-resolution imaging methods, the second material layers having a second thickness and the first material layers alternating with the second material layers;

at least one of the first and second material layers having a thickness of less than twenty-five nanometers.